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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,511	02/17/2004	Jumpei Kura	275835US6	1369

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EXAMINER	
DANIELSEN, NATHAN ANDREW	
ART UNIT	PAPER NUMBER
2627	

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/18/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/18/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/780,511	KURA ET AL.	
	Examiner	Art Unit	
	Nathan Danielsen	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *17 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-24 are pending.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

3. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Specification

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

5. Claims 3, 5, 10, 12, 18, and 20 are objected to because "under condition" should be changed to --under the condition--. Claims 4, 6, 11, 13, 19, and 21 are objected to because "so as to make said difference" should be changed to --so as to make constant said difference-- and the word "constant" at the end of each claim should then be deleted. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 1-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 2, 8, 9, 16, and 17 are rejected as being indefinite because it is unclear if applicant intends to claim multiple pluralities of said amplitudes of said radio frequency current, or only a single plurality of said amplitudes of said radio frequency current.

Claims 3, 5, 10, 12, 18, and 20 are rejected as being indefinite because it is unclear, based on the wording of the claims, if the condition for obtaining the difference is that the driving current is controlled at a constant level, or if the condition is obtaining a difference in order to control the driving current at a constant level.

Claims 4, 6, 7, 11, 13-15, 19, and 21-24 are rejected as being dependent on an indefinite claim.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 1, 2, 7-9, 14-17, and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nagara (US Patent 6,731,584), in view of Koike et al (US Patent 5,625,616; hereinafter Koike).

1,2,7-9,14-17 and 22-24

Regarding claims 1, 8, and 16, Nagara discloses a laser driving apparatus, optical head apparatus, and an information processing apparatus including:

a laser (figure 1);

a laser driving circuit for supplying a drive current to said laser (figure 1);

a radio frequency current superimposing means for generating a radio frequency current and superimposing said radio frequency current on said drive current (figure 1);

a lens system for reading and recording information signal for a recording medium (figure 1); and

servo control means for controlling said lens system (col. 3, lines 27-32) ;

said apparatuses comprising:

optical detection means for detecting an optical output of said laser (element 9 in figure 1 and col. 3, lines 15-16);

amplitude control means for controlling an amplitude of said radio frequency current to be superimposed on said drive current (element 36 in figure 1 and col. 7, lines 60-65);

optical output control means for controlling said laser driving circuit to make said optical output of said laser at a constant level (the combination of elements 20 and 36 in figure 1, col. 3, lines 46-61, and col. 7, lines 60-65); and

control means for controlling said amplitude of said radio frequency current on the basis of current values of said drive current obtained by said current monitoring means at a plurality of said amplitudes of said radio frequency current obtained by said amplitude control means or detection values of said optical output of said laser obtained by said optical detection means at a plurality of said amplitudes of said radio frequency current obtained by said amplitude control means (col. 8, lines 3-30).

However, Nagara fails to disclose where said apparatuses further comprise current monitoring means for monitoring said drive current.

In the same field of endeavor, Koike discloses where said apparatuses further comprise current monitoring means for monitoring said drive current (col. 3, lines 21-25).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Nagara with that of Koike, for the purpose of performing electronic deterioration monitoring of a laser diode (col. 1, lines 53-65).

Regarding claims 2, 9, and 17, Nagara, in view of Koike, discloses everything claimed, as applied to claims 1, 8, and 16, respectively. Additionally, Nagara discloses where a plurality of said amplitudes of

said radio frequency current are defined as two values including zero and non-zero (col. 8, lines 3-30 and 52-65).

Regarding claims 7, 14, and 22, Nagara, in view of Koike, discloses everything claimed, as applied to claims 1, 8, and 16, respectively. Additionally, Nagara discloses where said control means controls said amplitude of radio frequency current in response to a detected condition (col. 8, lines 3-30 and 52-65). However, Nagara fails to disclose where the detected condition is temperature and where said apparatuses comprise temperature monitoring means.

In the same field of endeavor, Koike discloses where said apparatuses further comprise:

temperature monitoring means for monitoring a temperature related to said laser (col. 5, line 45 through col. 6, line 22),

wherein said control means controls the operation of the apparatuses when a change in said temperature satisfies a predetermined condition (col. 5, line 45 through col. 6, line 22).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the apparatus of Nagara with that of Koike, for the purpose of performing electronic deterioration monitoring of a laser diode (col. 1, lines 53-65).

Regarding claims 15 and 23, Nagara, in view of Koike, discloses everything claimed, as applied to claims 8 and 16, respectively. Additionally, Nagara discloses where said amplitude of said radio frequency current is controlled while said optical output control means controls said laser driving circuit to make said optical output of said laser at said constant level, which is not greater than a reproduction power necessary for reading said information signal (col. 8, lines 3-30 and 52-65).

Regarding claim 24, Nagara, in view of Koike, discloses everything claimed, as applied to claims 8 and 16, respectively. Additionally, Nagara discloses where said amplitude control means and said control means control said amplitude of said radio frequency current when said reading and recording said information signal is not executed (col. 8, lines 3-30; where the prewriting data is interpreted to be data such as is recorded in the power calibration area of a (re)writable disc and the claimed information signal is interpreted to be user data).

Allowable Subject Matter

10. Claims 3-6, 10-13, and 18-21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

11. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record, either alone or in combination, fails to teach or fairly suggest where:

a. In claims 3, 10, and 18: said control means obtains a difference between said driving current monitored when said radio frequency current is superimposed on said driving current and said driving current monitored when said radio frequency current is not superimposed on said driving current; and

b. In claims 5, 12, and 20: said control means obtains a difference between said optical output detected when said radio frequency current is superimposed on said driving current and said optical output detected when said radio frequency current is not superimposed on said driving current.

Citation of Relevant Prior Art

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Asada et al (US Patent Application Publication 2003/0117923) disclose an alternate method of calibrating the amplitude of the superimposed radio frequency current.

Closing Remarks/Comments

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Danielsen whose telephone number is (571) 272-4248. The examiner can normally be reached on Monday-Friday, 9:00 AM - 5:00 PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nathan Danielsen
04/11/2007 ND

WAYNE YOUNG
SUPERVISORY PATENT EXAMINER